

- 1 We claim:
- 2 1. A casing adapter tool for connecting and sealing to a casing pipe at its lower end and to
3 production or service equipment at its upper end, and for use with a well servicing equipment,
4 comprising:
5 a generally tubular casing adapter body having an upper end and a lower end, said casing
6 adapter body being formed with a central bore extending therethrough, the central bore providing a
7 profile which forms a casing seal chamber at the lower end, and a barrier seal chamber located
8 thereabove;
9 lower connectors at the lower end of the casing adapter body for connecting and sealing to
10 the casing pipe;
11 top connectors at the upper end of the casing adapter body for connecting and sealing to
12 production or service equipment; and
13 the barrier seal chamber having a profile to accommodate and seal to a first removable
14 pressure barrier on removal of any well servicing equipment.
- 15 2. The casing adapter tool of claim 1, wherein the barrier seal chamber has a profile to
16 accommodate and seal to the first removable pressure barrier which is of a threaded, latched or
17 snap ring type check valve or plug.
- 18 3. The casing adapter tool of claim 2, wherein the barrier seal chamber is sized to provide full
19 bore access to the casing pipe.
- 20 4. The casing adapter tool of claim 3, wherein the casing adapter body forms a fracturing seal
21 chamber in the central bore above or below the barrier seal chamber, said fracturing seal chamber
22 having a profile to permit a fracturing isolation tool to be run in and sealed against the central bore.
- 23 5. The casing adapter tool of claim 1, wherein the casing adapter body includes an integral
24 tubing head portion at its upper end, which tubing head portion provides the top connectors at its
25 upper end for connecting to the production or service equipment, the tubing head portion being
26 formed with a central bore which communicates with the central bore of the casing adapter so as to

1 permit a fracture tool to be run therethrough, the central bore in the tubing head portion forming a
2 tubing hanger chamber for sealing relationship with a tubing hanger, and wherein the tubing hanger
3 provides for installation of a second pressure barrier.

4 6. The casing adapter tool of claim 2, wherein the casing adapter body includes an integral
5 tubing head portion at its upper end, which tubing head portion provides the top connectors at its
6 upper end for connecting to the production or service equipment, the tubing head portion being
7 formed with a central bore which communicates with the central bore of the casing adapter so as to
8 permit a fracture tool to be run therethrough, the central bore in the tubing head portion forming a
9 tubing hanger chamber for sealing relationship with a tubing hanger, and wherein the tubing hanger
10 provides for installation of a second pressure barrier.

11 7. The casing adapter tool of claim 3, wherein the casing adapter body includes an integral
12 tubing head portion at its upper end, which tubing head portion provides the top connectors at its
13 upper end for connecting to the production or service equipment, the tubing head portion being
14 formed with a central bore which communicates with the central bore of the casing adapter so as to
15 permit a fracture tool to be run therethrough, the central bore in the tubing head portion forming a
16 tubing hanger chamber for sealing relationship with a tubing hanger, and wherein the tubing hanger
17 provides for installation of a second pressure barrier.

18 8. The casing adapter tool of claim 4, wherein the casing adapter body includes an integral
19 tubing head portion at its upper end, which tubing head portion provides the top connectors at its
20 upper end for connecting to the production or service equipment, the tubing head portion being
21 formed with a central bore which communicates with the central bore of the casing adapter so as to
22 permit a fracture tool to be run therethrough, the central bore in the tubing head portion forming a
23 tubing hanger chamber for sealing relationship with a tubing hanger, and wherein the tubing hanger
24 provides for installation of a second pressure barrier.

25 9. The casing adapter tool of claim 8, wherein the casing adapter body includes one or more
26 sealed side ports between the tubing hanger chamber and the barrier seal chamber to provide for

1 access to the casing pipe.

2 10. The casing adapter tool of claim 1, wherein:

3 the bottom connectors to the casing pipe may include a slip lock connector, a welded
4 connection, a threaded connection, a flange connection or a clamp connection;

5 the casing adapter body may include an inwardly extending stop shoulder formed at the top
6 of the casing seal chamber in the central bore to protect the top of the casing pipe; and

7 the top connectors to the production or service equipment may include a threaded, flange or
8 clamp connection.

9 11. The casing adapter tool of claim 8, wherein:

10 the bottom connectors to the casing pipe may include a slip lock connector, a welded
11 connection, a threaded connection, a flange connection, or a clamp connection;

12 the casing adapter body may include an inwardly extending stop shoulder formed at the top
13 of the casing seal chamber in the central bore to protect the top of the casing pipe; and

14 the top connectors to the production or service equipment may include a threaded, flange or
15 clamp connection.